

## REMARKS

### Status of Claims

Claims 14-31 are pending, of which claims 14 and 16-17 are independent.

Claim 14 has been amended to correct informalities in claim language and to more clearly define the intended subject matter. Support for the amendment is found, for example, at FIG. 2 and Example 1 of the present disclosure. Care has been taken to avoid introducing new matter.

### Rejection under 35 U.S.C. § 102

Claims 14-23, 25-28 and 30-31 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Publication No. 20022127474 (Fleisher et al.). This rejection is traversed for at least the following reasons.

Applicants respectfully submit that, at a minimum, Fleisher fails to disclose that “*the base material comprises particles on which the acidic substance or the basic substance is immobilized, and the particles are dispersed in the acidic substance or the basic substance,*” as recited by amended claim 14. In the present subject matter non-conductive particles (e.g., titania, silica or alumina) on which an acidic substance (or basic substance) is immobilized are dispersed in a basic substance (or acidic substance) (see, for example, FIG. 2 and Example 1 of the present disclosure).

In contrast, Fleisher merely discloses that an acidic substance or basic substance is directly disposed on the support. It is also disclosed in [0221] of Fleisher that “a solution of the proton conducting polymer with the matrix polymer may be cast onto the porous support by dip, ---.” Further, according to claim 1 of Fleisher, the proton conducting polymer is formed from a

hydrophobic matrix polymer and a hydrophilic non-ionic polymer. However, even assuming that these hydrophobic matrix and hydrophilic non-ionic polymers were an acidic substance or basic substance, Fleisher still would fail to disclose immobilizing these polymers on particles, and dispersing the particles in the acidic substance or basic substance.

As such, it is clear that Fleisher fails to disclose the above identified features of claim 14. Accordingly, claim 14 and all claims dependent thereon are patentable.

Regarding independent claim 16, Applicant respectfully submit that, at a minimum, Fleisher does not disclose or suggest a proton conductor comprising **two materials** each having a particulate base, i.e., a particulate base material having an acidic substance immobilized on a surface thereof, and a particulate base material having a basic substance immobilized on a surface thereof. Accordingly, claim 16 and all claims dependent thereon are patentable over Fleisher.

Regarding claim 17, Applicants respectfully submit that, at a minimum, Fleisher fails to disclose or suggest that *“the base material is a porous body having pores or through-holes, and one of the acidic substance and the basic substance is immobilized on an inner wall of the pores or the through-holes of the porous body to form a first layer, and the other of the acidic substance and the basic substance is immobilized on the first layer by acid-base bond to form a second layer.”* In other words, Fleischer fails to disclose that an inner wall of the pores or through holes is covered by the first layer and the second layer formed on the first layer. Accordingly, claim 17 and all claims dependent thereon are patentable over Fleisher.

Based on the foregoing, it is requested that the Examiner withdraw the rejection of claims 14-23, 25-28 and 30-31 under 35 U.S.C. § 102(b).

**Rejection under 35 U.S.C. § 103**

Claims 24 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fleisher in view of U.S. Patent No. 6,264,857 (Kreuer et al.).

Applicants incorporate herein the arguments previously advanced in traversal of the rejection under 35 U.S.C. § 102(b) predicated upon Fleisher. The additional cited reference does not teach or suggest the above identified features of claims 16 and 17, from which claims 24 and 29 depend, respectively. Therefore, the combination of Fleisher with Kreuer would still fail to disclose the claimed features, and it would not have been obvious to add these features to such a combination. Accordingly, claims 24 and 29 are patentable over the cited references. Thus, it is requested that the Examiner withdraw the rejection of claims 24 and 29 under 35 U.S.C. § 103(a).

**CONCLUSION**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Michael E. Fogarty  
Registration No. 36,139

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 MEF:TS  
Facsimile: 202.756.8087  
**Date: October 2, 2009**

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as our correspondence address.**